ANNUAL REPORT AND STATISTICS

OF THE

GOVERNMENT OPHTHALMIC HOSPITAL, MADRAS

FOR THE YEAR

1915.

MADRAS:
PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS.

1916.

ADMINISTRATION REPORT OF THE GOVERNMENT OPHTHALMIC HOSPITAL, MADRAS, FOR THE YEAR 1915.

I. (a) Accommodation.—The following table shows the number of beds available for the various classes of patients and the average daily sick treated as in-patients during the year. As usual, it was not found possible to limit admissions to the number of beds available. The surplus sick were accommodated in the verandahs :—

1	2					3					4
Hospital.	Number of beds available.					Average daily sick.					Maximum treated on any one day in the year and date.
Government Ophthalmic Hospital.	Men.	Women.	Children. Male.	Children. Female.	Total.	Men.	Women.	Children. Male.	Children. Female.	Total.	
Europeans and Eurasians.	12	12	..	...	24	9·02	5·06	0·34	0·06	14·48	198 on February 7th and March 28th.
Indians	86	56	10		152	88·84	61·23	3·93	3·86	157·86	
Total ...	98	68	10		176	97·86	66·29	4·27	3·92	172·34	

(b) New buildings.—The covered passage joining the septic block with the rest of the hospital buildings sanctioned in G.O. 2210 W., dated 17th November 1914, at an estimated cost of Rs. 1,600 was completed and brought into use during the close of the year.

One iron ladder for the tank in the septic block and two for those in the European operation block were constructed under G.O. 2490 W., dated 18th December 1914, at an estimated cost of Rs. 410 in order to afford access to the tanks for cleaning them.

Monkey tops were provided for the windows in the nurses' quarters and minor improvements carried out at an estimated cost of Rs. 430 under G.O. 37 W., dated 7th January 1915.

Bath rooms were provided in all the sub-assistant surgeons' quarters and improvements carried out to a latrine attached to one of the quarters at a total estimated cost of Rs. 710 under G.Os. 347 W., dated 17th February 1915, and 148 W., dated 25th January 1915.

A storm water drain between the septic and Lady Lawley blocks was constructed at an estimated cost of Rs. 280 under G.O. 293 W., dated 10th February 1915.

Detailed plans and estimates for the school block were sent to the Surgeon-General with this office letter 2/713, dated 18th November 1915. The estimate is for Rs. 81,430.

(c) Alterations.—The European female special ward has been converted into quarters for the two nurses sanctioned for the septic block, the special ward patients being accommodated in the middle room of the European operation ward—vide G.O. 350, Public, dated 9th March 1915.

Plans and estimates for Rs. 1,300 for converting the Indian female general ward of six beds into European female general ward with the addition of a bath room and water closet have been sanctioned by the Superintending Engineer and the work will be begun early in April next. The present European female general ward will then be used as quarters for the probationer nurses in training here.

Plans and estimates for Rs. 1,330 to convert the European waiting room in the out-patient department into a dark room for ophthalmoscopic work and ceiling the rooms of the out-patient department with a thin boarding have been approved by the Surgeon-General in his 8-Bl./849, dated 14th February 1916, and are awaiting the Superintending Engineer's sanction.

(d) Repairs.—Ordinary and certain special repairs to the hospital buildings and the sub-assistant surgeons' quarters were carried out.

II. Training of Medical students.—The following classes of students attended classes during the year :—

M.B. & B.S.	24
L.M. & S.	24
Military pupils	3
Female students (Apothecary)	6
Sub-Assistant Surgeon students	57
Total ...	114

III. Training of nurses.—Nine nurse probationers came during the year to this hospital for their three months' training.

IV. Finance.—

	1914. RS.	1915. RS.
(*a*) Income	98,817	68,871
(*b*) Expenditure—		
1. Establishment	22,228	24,402
2. European medicines	11,503	5,723
3. Bazar medicines	...	...
4. Diet of patients	20,136	20,750
5. Miscellaneous	14,315	12,421
6. Buildings and repairs	30,635	5,575

1. Establishment.—The pay of the Superintendent is not included in the expenditure under this head as it is debited to Medical College. The increase in expenditure in 1915 is due to—

(1) the increased rates of pay sanctioned for the Military Assistant Surgeons from 11th November 1914.

(2) the additional nurse entertained for the septic block being in employ throughout the year as against only from 3rd November in 1914.

(3) the additional servants employed for the new blocks throughout the year while they were entertained only towards the last quarter of 1914.

(4) the increase to the establishment of nurses' servants sanctioned in G.O. 349, Public, dated 9th March 1915. The increase in expenditure would have been much more were it not for the fact that the place of the Second Military Assistant Surgeon who has gone on military duty has been filled throughout the year by a Civil Assistant Surgeon and the posts of a Sub-Assistant Surgeon and a nurse for the septic block remained vacant.

2. European medicines.—The expenditure under this head during the year shows a decrease of Rs. 5,780 from that of 1914. The increased expenditure in 1914 was due to the special instruments and appliances obtained from home for the septic block and the Pathological laboratory.

3. Diet of patients.—The expenditure under diet has increased during the year by Rs. 614. This is due to the increased numbers of daily average sick, viz., 172·34 in 1915 as compared with 151·68 in 1914.

4. Miscellaneous charges.—The expenditure under this head has fallen during the year by Rs. 1,894. This is mainly under "Purchase and repair of furniture" which amounted in 1914 to Rs. 2,849 against Rs. 790 in 1915. This increased expenditure was due to furniture bought for the new blocks. The expenditure under the following heads however show an increase due to the new buildings that have come into existence :—

	1915. RS.	1914. RS.
Maintenance of electric installation	5,968	5,632
Rents, rates and taxes	1,317	1,016

The expenditure under the other heads do not show any remarkable variation.

5. Buildings and repairs.—

	1915. RS.	1914. RS.
Original works	3,107	* 25,268
Repairs	2,468	5,367
Total ...	5,575	30,635

(*a*) **Original works.**—The following original works were carried out during the year at the cost shown against each :—

Name of work.	Amount of estimate. RS.	Outlay to end of December 1915. RS.
1. Providing electric fans in the examination room, lights at the two front gates, constructing covered passage to the septic block and constructing 3 iron ladders ...	2,296	1,934
2. Constructing 4″ sewer at the rear of the hospital ...	1,750	4
3. Improvements to nurses' quarters	350	326
4. Improvements to Sub-Assistant Surgeons' quarters ...	710	443
5. Constructing a storm water drain	280	276
6. Providing additional light in the European female ward	28	18
7. Providing an expanded metal gate to the north gateway ...	110	87
8. Providing a wall plug in the administration block ...	40	19
Total ...	5,564	3,107

* The increased expenditure in 1914 under original works was on account of the new blocks that were compelted during that year.

6. Repairs.—The following repairs were carried out during the year:—

Name of work.	Amount of estimate.	Outlay to end of December 1915.
	RS.	RS.
1. Minor improvements to drainage wells	30	15
2. Improvements to kitchen	170	99
3. Providing and fixing stopcocks at the inlet and the outlet pipe connections to motor pump	25	14
4. Closing the leakages in the office and septic blocks ..	220	180
5. Upkeep of Red hills water service pipes	200	11
6. Annual repairs to the Hospital buildings for 1915–16 ...	2,400	304
7. Special repairs to Newllite tiles	500	71
8. Annual repairs to Resident Assistant Surgeon's quarters for 1915–16	80	67
9. Annual electric repairs	2,518	1,445
10. Annual repairs to Sub-Assistant Surgeon's quarters ...	140	47
11. Ordinary repairs to Sub-Assistant Surgeon's quarters...	50	10
12. Special repairs to Out-Patient Dispensary	230	205
Total ...	6,563	2,468

V. Special Funds—Poor Fund.—This fund is supported by voluntary contributions from the public who attend the hospital, and the money collected is expended in providing spectacles and in paying the railway fares of poor patients etc.

	RS.	A.	P.
The balance on hand at the beginning of the year was	246	11	6
Amount collected during the year	106	12	6
Total ...	353	8	0
Expended during the year	69	1	0
Balance on 31st December 1915 ...	284	7	0

VI. Supplies.—(1) Medicines are as a rule obtained from the Medical Store depot on indent. Special medicines and appliances, etc., are got from home on indent on the India Office. Such medicines as are not available at the Medical Store depot and required urgently are bought locally.

(2) Repairs to instruments which cannot be done in the Medical Store Depot are done locally.

(3) **Diet articles.**—Tenders are called for in the open market for supply of both storable and perishable articles of diet. The rates are finally approved by the Surgeon-General to whom the tenders are submitted with the Superintendent's recommendation. The storable articles are obtained half-yearly in April and October. The perishable articles are obtained daily from the successful contractor or contractors.

(4) **Hospital necessaries** are obtained in the same way as diet articles. A few for which no tenders were received or for which the rates quoted were higher than the market rates are purchased departmentally from time to time as required.

(5) **Furniture and repairs.**—The amount spent under this head during the year was Rs. 790 as compared with Rs. 2,849 in 1914.

(6) **Bedding and clothing.**—Such articles as can be supplied by the jails are obtained from them and other articles from local merchants by means of tenders.

VII. Lighting.—The electric lights and fans have worked satisfactorily.

VIII. Working of establishments.—All departments have worked well during the year. The House surgeons have been found to be useful in the working of the Hospital during the later part of their time. They are still non-resident owing to the proposed quarters not having yet been acquired on account of lack of funds; this lessens their value to some extent. The need of a place for teaching referred to in the last report is badly felt. This will be remedied only by the completion of the proposed school.

IX. Verification of stock.—The stock of Government property was verified and found correct.

X. Verification of service registers.—All service books have been verified up to 31st December 1915.

MADRAS,
31st January 1916.

H. KIRKPATRICK, Major, I.M.S.,
Superintendent, Government Ophthalmic Hospital, Madras.

PROFESSIONAL REPORT OF THE GOVERNMENT OPHTHALMIC HOSPITAL, MADRAS, FOR THE YEAR 1915.

1. The following numbers show the statistics of the year that relate to professional subjects :—

	1915.	1914.	Average for the last 5 years (1910 to 1914).
Number of in-patients treated ...	2,593	2,395	2,284
Number of out-patients treated ...	16,654	13,180	12,359
Number of operations on in-patients ...	*1,867	1,912	1,778
Number of operations on out-patients ...	1,201	1,173	981
Number of operations for senile cataract ...	1,109	878	801

*Sub-conjunctival injections of saline which were reckoned at a nominal 120 a year are omitted for the first time from the number of operations.

Daily average of out-patients has been 228 against 165 in 1914.

Daily average of in-patients has been 172 as compared with 151 in 1914. The following are the details as regards the number of in-patients treated during the year:—

Number treated ...	2,593
Remaining on 1st January 1915 ...	116
Admitted during the year ...	2,477
Discharged ...	2,447
Cured ...	1,576
Relieved ...	674
Otherwise ...	188
Died ...	9

It is possible that the general increase in numbers may be due to the transfer of so many District Medical officers to field service.

2. **Classes and sexes treated.**—Please see statement F of the Annual Statistical returns.

3. **Epidemics.**—Nil.

4. The following shows the classes of diseases treated during the year among both in- and out-patients :—

——	In-patients.	Out-patients.	Total.
Gonorrhœa ...	4	66	70
Leprosy ...	...	4	4
Malaria ...	1	3	4
Syphilis ...	37	172	209
Other tubercular diseases ...	1	28	29
Anæmia ...	1	8	9
Diabetes ...	1	3	4
New growth, non-malignant ...	19	49	68
Do. malignant ...	6	13	19
All other general diseases ...	1	1	2
Diseases of the nervous system ...	2	29	31
Do. eye ...	2,413	14,729	17,142
Do. ear ...	...	4	4
Do nose ...	...	8	8
Do. circulatory system ...	...	2	2
All diseases of the respiratory system except pneumonia and tubercle of the lungs ...	...	7	7
Diarrhœa ...	1	2	3
All other diseases of the liver ...	...	8	8
Do. do digestive system ...	13	10	23
Goitre ...	...	2	2
Bright's disease ...	...	1	1
Diseases of the connective tissue ...	7	379	386
Ulcer ...	1	...	1
Other diseases of the skin ...	1	1	2
Injuries, general and local ...	84	1,125	1,209
Total ...	2,593	16,654	19,247

5. Until the end of May the routine operation for senile cataract was capsulotomy and extraction with irrigation. Expression in the capsule was substituted during the remainder of the year, capsulotomy only being performed on one-eyed persons or on eyes having suspicious conjunctivæ or signs of disease of the deeper parts.

Considering the operation to be successful if vision was $\frac{6}{36}$ or better, a partial success if less than $\frac{6}{36}$ and more than finger counting at 2 metres and a failure if unable to count fingers at 2 metres, the following results were obtained in 910 operations performed by the same operator :—

403 Extractions up to the end of May.			420 Expressions.		
Success.	Partial success.	Failures.	Success.	Partial success.	Failures.
353 87·5 %	37 9·1 %	13 3·2 %	350 83·3 %	30 7·1 %	40 9·5 %

87 Extractions after end of May.		
Success.	Partial success.	Failures.
76 87·3 %	8 9·1 %	3 3·4 %

Considering the series of 420 expressions in the capsule the cause of failure in 21 instances out of the 40 (a case percentage of 5 per cent) was irido-cyclitis following impaction of the hyaloid and vitreous subsequent to the operation. In most of these cases the eye was quiet and the chamber formed on the third day, rupture of the wound and prolapse of the hyaloid occurring when the patient moved about more freely. Irido cyclitis followed a vitreous escape at the time of operation in six instances.

Three failures—a percentage of 0·71 in the series—were due to suppurative panophthalmitis. There is no doubt that infection took place through the elbow of the pressure hook touching the lower lid and was easily avoided when the error in technique was recognized. In 11 per cent of the operations escape of vitreous took place ; in the vast majority of instances the amount lost was very small, being in many cases a mere smear. The two series of capsulotomy and extraction operations show practically the same results and may be considered together as 490 cases. The failures were 16 and of these 4 were due to secondary cortical cataract and were capable of cure. Two were due to expulsive hæmorrhage and one to retinal detachment. One was caused by capsule impaction and two by iritis. There were no instances of suppuration, a fact which is further evidence of the harmlessness of irrigation and the value of conjunctival disinfection—both of which measures are thoroughly carried out in this hospital.

Thirty-seven of the 45 partial success only required a discision to render them complete, the defect being due to a secondary capsular cataract. Iris prolapse occurred in six cases or in 1·2 per cent and a vitreous escape at the time of operation in 15 or 3 per cent (in only two of these was there more than a trace lost).

The simple operation was performed in eight cases and in none of these was there iris prolapse.

The figures of the two modes of operation (capsulotomy and expression) are quoted not as evidence that one is necessarily better in all cases than the other but as a record of the results obtained in Smith's operation by an operator accustomed to successful extraction after capsulotomy who, having the advantage of a skilled assistant, has performed Smith's operation after a careful perusal of the written descriptions by Colonel Smith and Doctor Vail.

Under G.O. 1352, Public, dated 16th October 1914, cataract spectacles are now supplied at Government expense to all patients operated upon in this hospital who may be unable to buy them.

6. Elliot's operation of corneo-scleral trephining was performed 141 times. The results both immediate and as seen in patients trephined in previous years are such as to support the view that this is the best operation for most glaucomatous and staphylomatous conditions.

This operation was performed on a child aged five months for buphthalmos and keratoglobus, an excellent result being obtained. At the time of operation the horizontal diameters of the corneæ were 15 mm. and the corneæ were becoming opaque. The child showed no tendency to fixation. Seen 11 months later, the child looked healthy, ran about freely and saw

small objects well. The papillæ show incomplete cupping and are a good colour. The corneæ have cleared except for a few faint striæ.

7. Excision of the lachrymal sac was performed 131 times. This operation is so simple, so certain in giving relief and in every way satisfactory that no intra-nasal operations were substituted. Excision was only performed when obstinate obstruction or muco-purulent retention were present. In the case of a male Muhammadan, aged 25, the cause of the dacryo cystitis was found to be the Rhinosporidium kinealyi. This was especially interesting as no trace of the infection could be found in the nose after a most careful examination and the conjunctive was also free. The appearance of the swelling was rather peculiar being semi-elastic rounded mass, the size of a filbert which being extended from the site of the sac much further outwards along the lower border of the orbit than an inflamed and distended sac generally does. The disease unfortunately recurred in the site of the sac two months after. And it was then freely excised, the tissues being scrubbed with a solution of quinine bisulphate grs. 10 to 1 oz. The patient was seen ten months after the second operation and found to be free of the disease.

8. The number of persons in the Presidency who suffer from an optic atrophy which is secondary to a mild neuritis or to a retrobulbar neuritis is always very striking. Notes on 50 cases of optic atrophy have been taken since October 1st, 1914, and of these 12 were primary and 38 secondary. Thirty-nine were 30 years of age or older and 11 under 30. Forty-one were males and nine were females. The disproportion is not so very great when it is recollected that many more males than females are treated in the hospital. (The male out-patients are nearly twice as many as the female.) Thirty-eight were children resulting from a marriage between first cousins and in another 11 cases it was the ordinary custom in the family for a man to marry his maternal uncle's daughter or sister's daughter though their own parents had not done so. In the only case of the series which was free from a suggestion of in-breeding the atrophy was secondary to a neuritis of an acute type and the patient suffered from rénal disease.

In this connection it should be noted how common consanguineous marriages are in this Presidency. On taking a census of the males attending the out-patient department of the General Hospital it was found that out of 434 men 60·3 per cent were children of first cousins and in a further 3·7 per cent consanguineous marriages were the custom of the family. In only 36 per cent was the history negative. By the kindness of the Agent, statistics were taken respecting emigrants in the Government Emigration Depot. Fifty-one per cent of these were children of first cousins and practically all the remainder stated that consanguineous marriages were customary in their family. It is quite common to be told that a person's ancestors for four or five generations have been closely related and it is difficult to believe that the Indian public fully realise the evils of in-breeding and the inevitable degeneration that must result from it.

In 39 instances pyorrhœa was present to a varying extent. This important disease probably exists in at least 80 per cent of the Indian population of middle age.

The blood was tested for a Wasserman's reaction in 38 of the patients with a positive result in 27; 14 of these denied having had syphilis, whilst of the 11 patients whose reaction was negative four stated they had had venereal disease. Of the 12 whose blood was not examined only one admitted having had syphilis. On the whole a venereal morbidity of 72 per cent was present.

The Director and staff of the King Institute have been very kind in carrying out a large number of tests for Wasserman's reaction for the hospital during the year.

A history of a previous severe illness was remarkably scarce; two had had malaria and six dysentery. Forty per cent had an eosinophilia of over 10 per cent and indicanuria was marked in 5 or 10 per cent.

The somewhat high proportion of males suggests that some of these cases may have been instances of Leber's disease, but with so many sources of error an accurate family history for generations is impossible.

9. Notes on 39 patients suffering from retinitis pigmentosa were taken during the same period. Of these 71·7 per cent were the children of first cousins, and a further 12·8 per cent made consanguineous marriages a family custom. The statistics of this disease thus show a lower average of in-breeding than those of the optic atrophy series.

10. A further series of notes on the couching operation numbering 350 cases have been taken. These correspond very closely with the last series of 550 published by Colonel Elliot in 1912. Every patient who is operated upon for cataract, is now given when he leaves hospital a small pamphlet written in the vernacular on the evils of the couching operation based on these statistics. It will be noticed that a corrected vision of $\frac{6}{60}$ is reckoned a success and ability to count fingers near his face a partial success, so that the standard is very lenient to the operator, especially when it is considered that in the vast majority of instances (74 per cent) more than six months had elapsed since the operation and that no astigmatism or pupil distortion is caused by it. Under the circumstances a standard of $\frac{5}{15}$ would not be too high to expect of a healthy eye. A similar low

standard applied to extractions done in this hospital would give about 94 per cent success, 5 per cent partial success and 1 per cent failure.

	Per cent.
Successes (Vision $\frac{6}{60}$ and above	21·4
Partial successes (below $\frac{6}{60}$ but able to count fingers)	16·5
Failures (able to distinguish light and dark or no vision at all)	62·1

As Colonel Elliot stated, the mischief done by the coucher is appalling, and he is a standing menace to society. It may be said that out of every 100 eyes he operates upon 75 will be of no practical use after a very short time. Irido-cyclitis was the commonest cause of failure and glaucoma the next most common.

11. The great value of sub-conjunctival injections of mercury and saline solution in the treatment of Uveal disease was amply demonstrated by our experience during the year. These injections have been in use in this hospital during the last eleven years.

12. The number of admissions for kerato-malacia has increased considerably since the opening of children's ward and the provision of a larger nursing staff. Good results have been obtained by the use of ammonium chloride and calcium chloride, with cod liver oil inunctions.

13. The vaccines used during the year were chiefly stock gonorrhœal ones. Very good results were obtained by their use in gonorrhœal ophthalmia, e.g.—

Muhammadan girl, age 10, admitted on 13th February 1915 for Gonorrhœal Ophthalmia in both eyes, the left cornea being extremely ulcerated. Gonococci were present in discharge. She was given an injection of 5 million gonococcal vaccine, urotropine grs. 10, three times daily, with atropine and argyrol. The discharge had completely stopped o ur days later, and her right eye was saved.

Gonococcal vaccine has also been used in cases of catarrhal-cyclitis, irido-cyclitis and interstitial keratitis with success: a Hindu male, age 40, was admitted on 23rd March 1915, for cyclitis left eye. Right eye vision $\frac{6}{6}$, left eye vision finger counting at 1 metre. He was put on atropine, leeches and mercury. The atropine was stopped five days later. On 30th March 1915, he was only able to count fingers at 1½ metres with the left eye. He was then given four injections of vaccine and on 24th April 1915 his vision was 5/6. He was readmitted on 1st June 1915 for a similar attack in the right eye the vision of which was now reduced to counting fingers at 3 metres. Similar treatment was given, the dose of vaccine reaching 75 millions. On 3rd July 1915 right eye vision 6/6, left eye vision 5/6.

Hindu, male, age 38, admitted 18th May 1915 for cyclitis of right eye, the vision being fingers at 1 foot. Under potassium iodide and mercury the vision had improved to 2½ metres on May 29th but he now developed an attack in the left eye, the vision of which was reduced to finger counting at 1 metre. On 1st June 1915 he was given 10 millions and on 5th June 1915 right eye vision 6/30, left eye vision fingers at 1¾ metres. He was given four injections, progress being continuous and on 3rd July 1915 on discharge right eye vision 6/24 and left eye vision 6/12.

Gonococcal vaccine was also given with good results in a case of interstitial-keratitis in a man aged 40, but in this case other treatment was also used.

Tuberculin injections were used with a slight apparent advantage in a few cases in which they seemed to be indicated.

An autogenous staphylococcus aurens vaccine was of great value in the treatment of one case of ulcerative blepharitis accompanied by superficial recurrent corneal ulcer. The disease had lasted for some months and was cured in two weeks by mild local treatment and the vaccine.

14. An interesting case of what was apparently spasm of the retinal arteries was admitted on December 14th. The patient was a boy, age 16, and came from a mission school up-country with a history that the sight of both eyes had suddenly and completely failed ten days previously. The sight had been a little dim the previous day. There was slight bitemporal headache lasting four days after the attack commenced. The boy's mother was a drunkard and had recently died insane.

For the last six years he had been subject to fits which recurred about every four months. He lost consciousness for about half an hour during a fit. He had had no fit during the preceding six months. He stated he had had slight attacks of malaria and dysentery during the previous five months, but had been well for two months. Beyond a slight anæmia (hæmoglobin 90 per cent) there was nothing remarkable in the general condition. The doctor stated that when he examined him ophthalmoscopically (apparently on the day following the attack) he remarked that his normal red reflex had become completely white. On admission his pupils were sluggish and there was nothing at all abnormal to be found by the ophthalmoscope beyond a few stringy vitreous opacities and a marked venous pulse at the nerve heads. He was put on nitrate of amyl inhalations and in four days the vision in each eye had improved to 5/30, and on the 26th, twelve days after admission, to 5/15. His fields

of vision were much contracted and he still had difficulty in finding his way about. He was given intra-muscular injections of cyanide of mercury and strychnine and by January 11th his vision was 5/5 in each eye. He was discharged on January 24, 1916, with 5/5 and a full field, the ophthalmoscopic notes being :—right eye a few small vitreous opacities, fundus otherwise normal; left eye a small opacity in lens surrounded by a few fine specks, rather large stringy opacities in the vitreous.

15. Nine deaths took place during the year. Five of these were in infants suffering from kerato-malacia and enteritis. One was a woman who was admitted and died the same day from meningitis complicated by corneal ulceration. Another was a girl with pyæmia and orbital abscess. The eighth was a man who had been operated upon for cataract nine days previously. The eye was released on the morning of the ninth day being healed and quiet with good vision. The effect of the release was peculiar as he hanged himself with his cloth in the water closet one hour after. He was found shortly afterwards but he had a cerebral hæmorrhage and efforts at resuscitation failed. He was very restless and somewhat demented after the operation so that the second eye was released on the first day but had afterwards shown no sign of lunacy. The ninth death was that of a man who had been in hospital for nine days suffering from a mild optic neuritis. He developed cerebral malaria and died in ten hours of respiratory failure.

MADRAS,
31st January 1916.

H. KIRKPATRICK, Major, I.M.S.,
Superintendent, Government Ophthalmic Hospital, Madras.

STATEMENT A.

SHOWING the number of dispensaries in the Government Ophthalmic Hospital, Madras, during the year 1915.

Class of dispensary.	Number open on 31st December.	Number opened during the year.	Number closed during the year.	Number open on the last day of the year.	Remarks.
1	2	3	4	5	6
I.—State-Public ...	1	...	...	1	

STATEMENT B.

SHOWING the number of in-door and out-door patients treated in the Government Ophthalmic Hospital, Madras, during the year 1915.

District.	Name of dispensary.	Of what class.	In-door patients. Total treated during the year. Men.	Women.	Children. Male.	Children. Female.	Total.	Number cured.	Number relieved.	Discharged otherwise.	Died.	Ratio of deaths per cent to total treated.	Number of beds available. Men.	Women	Children.	Daily average number. Men.	Women.	Children. Male.	Children. Female	Total.	Out-door Patients. Number treated. Attended personally.	Represented by friends.	Total treated. Men.	Women.	Children. Male.	Children. Female.	Total.	Average daily attendance. Men.	Women.	Children. Male.	Children. Female.	Total.	Total number of patients treated both in-door and out-door.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Madras ...	Government Ophthalmic Hospital.	I	1,464	1,018	63	48	2,593*	1,680	714	190	9	0·34	98	68	10	97·86	66·29	4·27	3·92	172·34	...	...	...	...	...	...	...	...	...	...	...	...	2,593
Do. ...	Do.	I	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16,654	...	9,790	4,794	1,092	978	16,654	127·31	67·88	16·78	16·17	228·14	16,654
	District total—class A (General dispensaries).	I	1,464	1,018	63	48	2,593	1,680	714	190	9	0·34	98	68	10	97·86	66·29	4·27	3·92	172·34	16,654	...	9,790	4,794	1,092	978	16,654	127·31	67·88	16·78	16·17	228·14	19,247
	Combined District total.	I	1,464	1,018	63	48	2,593	1,680	714	190	9	0·34	98	68	10	97·86	66·29	4·27	3·92	172·34	16,654	...	9,790	4,794	1,092	978	16,654	127·31	67·88	16·78	16·17	228·14	19,247

* Remaining on 1st January 1916—146.

STATEMENT C (I).

SHOWING the diseases, etc., of the in-door patients treated in the Government Ophthalmic Hospital, Madras, during the year 1915.

District.	Class of dispensary.	Infective diseases. — Gonorrhœa. Total treated.	Gonorrhœa. Deaths.	Malaria. Total treated.	Malaria. Deaths.	Syphilis (primary and secondary). Total treated.	Syphilis. Deaths.	Tubercular diseases. Total treated.	Tubercular diseases. Deaths.	Other general diseases. — Anæmia. Total treated.	Anæmia. Deaths.	Diabetes. Total treated.	Diabetes. Deaths.	New growth. Non-malignant. Total treated.	Non-malignant. Deaths.	New growth. Malignant. Total treated.	Malignant. Deaths.	All other general diseases. Total treated.	All other general diseases. Deaths.	Systemic diseases. — Diseases of the nervous system. Total treated.	Diseases of the nervous system. Deaths.
1	2	3		4		5		6		7		8		9		10		11		12	
Madras.	I ...	4	...	1	1	37	...	1	...	1	...	1		19	...	6		1	..	2	1
	Total.	4	...	1	1	37	..	1	...	1	...	1	...	19	.	6	...	1	...	2	1

District.	Class of dispensary.	Systemic diseases—*cont.* Diseases of the eye. Total treated.	Diseases of the eye. Deaths.	Diarrhœa. Total treated.	Diarrhœa. Deaths.	All other diseases of the degestive system. Total treated.	All other diseases of the degestive system. Deaths.	Diseases of the connective tissue. Total treated.	Diseases of the connective tissue. Deaths.	Ulcers. Total treated.	Ulcers. Deaths.	Other diseases of the skin. Total treated.	Other diseases of the skin. Deaths.	General and local — Injuries (general and local). Total treated.	Injuries. Deaths.	Total number of in-door patients. Total treated.	Total number of in-door patients. Deaths.	Operations. Total treated.	Operations. Deaths.
		13		14		15		16		17		18		19		20		21	
Madras.	I ...	2,413	1*	1	..	13	5	7	...	1		1	...	84	1	2 593	9	1,867	...
	Total.	2,413	1	1	...	13	5	7	...	1	...	1	...	84	1	2,593	9	1,867	...

INSTRUCTIONS.

(1) Statement C (I) is complementary to statement B and is intended to relate only to those institutions from which complete information can be expected.

These are State-Public, Local Fund, and Private-aided institutions (classes, I, III, IV of the classes in statement A).

(2) Details need not be given for each institution. It will suffice if totals are given for each class.

(3) For guidance in filling up the columns the following remarks are added :—

In all cases the instructions contained in "The Nomenclature of diseases," fourth edition, 1906, should be followed.

Column 4 to include all diseases due to malaria. Non-malarial fevers should be returned in column 11—"All other general diseases."

,, 5 to include all diseases due to the poison of syphilis, i.e., syphilitic iritis.

,, 3 to include all diseases resulting from gonorrhœal infection, e.g., gonorrhœal rheumatism.

,, 7 to include only cases of anæmia of which the cause cannot be ascertained.

* Suicide by hanging.

STATEMENT C (II)

SHOWING the diseases of the out-door patients treated in the Government Ophthalmic Hospital, Madras, during the year 1915.

District.	Class of dispensary.	Infective diseases. Gonorrhœa.	Infective diseases. Leprosy.	Infective diseases. Malaria.	Infective diseases. Syphilis (primary and secondary).	Infective diseases. Other tubercular diseases.	Other general diseases. Anæmia.	Other general diseases. Diabetes.	Other general diseases. New growth. Non-malignant.	Other general diseases. New growth. Malignant.	Other general diseases. All other general diseases.	Systemic diseases. Diseases of the nervous system.	Systemic diseases. Diseases of the eye.	Systemic diseases. Diseases of the ear.	Systemic diseases. Diseases of the nose.	Systemic diseases. Diseases of the circulatory system.	Systemic diseases. All diseases of the respiratory system except pneumonia and tubercle of the lungs.	Systemic diseases. Diarrhœa.	Systemic diseases. All other diseases of the liver.	Systemic diseases. All other diseases of the digestive system.	Systemic diseases. Goitre.	Systemic diseases. Bright's diseases.	Systemic diseases. Diseases of the connective tissue.	Systemic diseases. Other diseases of the skin.	General and local. Injuries (general and local).	Total number of out-door patients.	Operations.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Madras.	Government Ophthalmic Hospital, I.	66	4	3	172	28	8	3	49	13	1	29	14,729	4	8	2	7	2	8	10	2	1	379	1	1,125	16,654	1,201
	Total.	66	4	3	172	28	8	3	49	13	1	29	14,729	4	8	2	7	2	8	10	2	1	379	1	1,125	16,654	1,201

INSTRUCTIONS.

(1) Statement C (II, is complementary to statement B and is intended to relate only to those institutions from which complete information can be expected. These are State-Public, Local Fund and Private-aided institutions (classes I, III, IV of the classes in statement A).

(2) Details need not be given for each institution. It will suffice if totals are given for each class.

(3) For guidance in filling up the columns the following remarks are added :—

In all cases the instructions contained in "The Nomenclature of Diseases," fourth edition, 1906, should be followed.

Column 5 to include all diseases due to malaria. Non-malarial fevers should be returned in column 12—"All other general diseases."

" 6 to include all diseases due to the poison of syphilis, e.g., syphilitic iritis.

" 3 to include all diseases resulting from gonorrhœal infection, e.g., gonorrhœal rheumatism.

" 8 to include only cases of anæmia of which the cause cannot be ascertained.

STATEMENT F.

NUMBER of In-door and Out-door Patients, according to Class and Sex, treated in the Government Ophthalmic Hospital, Madras, in the year 1915.

District.	Name and class of dispensary.	Europeans and Eurasians.				Hindus.				Muhammadans.				Others.				Total treated.
		Adults.		Children.		Adults.		Children.		Adults.		Children.		Adults.		Children.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Madras.	Government Ophthalmic Hospital, Class I. In-patients	81	63	5	3	1,132	792	40	37	150	79	9	2	101	84	9	6	2,593
	Out-patients	614	375	68	43	7,402	3,509	759	745	896	250	102	58	878	660	163	132	16,654
	Total ...	695	438	73	46	8,534	4,301	799	782	1,046	329	111	60	979	744	172	138	19,247

INSTRUCTIONS.

(1) Statement F is intended to comprise only those institutions from which full information can be expected. These are State-Public, Local Fund and Private-aided dispensaries (Classes I, III and IV of the classes shown in statement A).

(2) In filling up columns 5, 6, 9, 10, 13, 14, 17, 18 all under ten years of age should be reckoned as children.

(3) The number of individual patients and not the number of visits should be shown throughout.

(4) The specimen form is primarily adapted for use in provinces of India proper. For the Burma Provincial report the arrangement of the columns may be altered as the local Government sees fit.

STATEMENT G.

SHOWING the Surgical Operations performed in the Government Ophthalmic Hospital, Madras, during the year 1915.

Class of operation.	Nature of operation.	Number of patients remaining from last year.	Number of operations performed during the year.			Number of patients operated on in columns 4 to 6.	Result of operations on patients.				Number of patients remaining at close.
			Principal.	Secondary.	Total.		Cured.	Relieved.	Dis-charged otherwise.	Died.	
1	2	3	4	5	6	7	8	9	10	11	12
Operations on tumours	Removal by excision	...	7	...	7	7	7	...	...	...	...
Do. cysts	Do.	...	14	...	14	14	14	...	...	...	...
Do. for abscesses ...	For acute abscess—incision	...	28	...	28	28	28	...	...	...	...
Operations on the skin and subcutaneous tissues.	Skin-grafting	...	2	...	2	2	...	2	...	...	...
	Curetting—for sinuses	...	4	...	4	4	3	...	...	...	1
	* Repair of wounds	...	3	...	3	3	3	...	..	.	...
Operations on the brain or meninges.	* Exploration for tumour (Encephalocele) ...	...	1	...	1	1	...	...	1	...	...
Operations on the eye and its appendages.	Operations on the eyelids—for entropion—										
	Streatfields and modified streafields	..	12	..	12	12	12	...	...	...	...
	Modified Von.-Milligans	...	3	...	3	3	3	...	...	...	..
	Plastic operation	1	12	...	12	12	13	...	...	..	.
	For trichiasis—Electrolysis	...	14	...	14	14	14	...	...	...	
	For trachoma	1	206	9	215	206	150	46	...	...	11
	* For stye	...	25	...	25	25	25	...	...	...	...
	* For chalazion	...	119	...	119	119	119	...	...	...	...
	Operations on the other appendages of the eye—										
	For pterygium	..	68	...	68	68	68	...	...	...	...
	For diseases of lachrymal sac and lachrymal obstruction—										
	Excision of lachrymal sacs	1	131	2	133	131	131	...	..	...	1
	Incision for lachrymal abscess	..	37	2	39	37	...	37	...	...	...
	Probing and syringing for lachrymal obstruction.	...	20	2	22	20	...	20	...	...	..
	Dilatation of canaliculus and syringing for lachrymal obstruction.	...	134	12	146	134	...	134	...	...	..
	Operations on the eyeball—										
	Iridectomy	3	139	...	139	139	...	140	1	...	1
	Iridotomy	...	8	1	9	8	2	4	2	...	..
	Tattooing cornea—for leucoma		1	..	1	1	...	1	...		..
	Corneal section or cauterisation for ulcer ...	4	66	6	72	66	...	70	...	...	.

5	Paracentesis	2	12	...	12	12	...	12	...	...	2
	Peritomy	...	2	...	2	2	2	...	...	...	...
	Needling for solution of lens	1	18	5	23	18	15	2	...	...	2
	Extraction of lens	13	1,112	..	12	1,112	1,019	44	38	...	24
	Removal of lens	...	12	..	12	12	4	7	...	...	1
	Laceration of opaque capsule	...	15	3	18	15	14	...	1	...	...
	Extraction of foreign bodies	...	519	2	521	519	519	...	..	...	...
	For staphyloma—sclero-corneal trephining ...	...	12	..	12	12	...	12	...	...	...
	Evisceration of eyeball	...	44	...	44	44	...	42	...	...	2
	Excision of eyeball	1	79	.	79	79	...	80	...	...	...
	Frost's operation	...	12	...	12	12	...	12	...	...	..
	Excision of contents of orbit	..	3	...	3	3	...	3	...	...	...
	For detachment of retina—Aspiration of fluid.	..	1		1	1	...	1	...	...	...
	* Operations for Glaucoma— Sclero-corneal Trephining	2	119	10	129	119	...	117	...	...	4
	Total ...	29	3,014	54	3,068	3,014	2,165	786	43	...	49
		3,043					3,043				

INSTRUCTIONS.

(1) Statement G is intended to comprise only those institutions from which complete information can be expected. These are State-Public, Local Fund and Private aided dispensaries (Classes I, III, IV of the classes shown in statement A.)

(2) Column 1 is intended to show the class of operation, column 2 the particular character of the operation. Operations should be grouped in column 1 in the following manner :—Operations on Tumours, Cysts, etc.

STATEMENT III-B.

SELECTED List of Surgical Operations showing the number of each performed by Individual Medical Officers during 1915.

Name of operator.	Period on duty.	Excision of tumours (all kinds).	Excision of cysts.	Stratfields and modified stratfields for entropium.	Amputation. Through and above metacarpus.	Amputation. Through and above metatarsus.	Extraction of lens.	Abdominal section (for any purpose other than obstetrical).	Modified Von-milligan's operation for entropion.	Removal of vesical calculi. Plastic operation for entropion.	Removal of vesical calculi. Excision of Lachrymal sacs.	Iridectomy, ordinary.	Iridotomy.	Sclero-corneal Trephining Elliot's.	Needling for solution of Lens.	Excision of eyeball.	Frost's operation.	Excision of contents of orbit.	Aspiration of fluid for detachment of retina.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Major Kirkpatrick, Indian Medical Service.		7	14	11	...	...	972	...	3	12	110	117	8	120	18	59	12	3	1	1,467
Other Medical Officers	...	...	...	1	...	...	140	...	...	...	21	7	...	11	...	20	...	..	...	200
Total ...	...	7	14	12	...	...	1,112	...	3	12	131	124	8	131	18	79	12	3	1	1,667

NOTE.—The blank columns are for the purpose for registering any operations which on account of their importance or of the number of them performed appear to the Medical Officer to be worthy of record. Should the number of blank columns be found insufficient, fresh columns may be added by pasting on paper in the usual way.

STATEMENT H.

SHOWING the income and expenditure of the Government Ophthalmic Hospital, Madras, in the year 1915.

District.	Name of dispensary.	Income. Government contribution. As salary.	Government contribution. Otherwise.	Miscellaneous receipts (to include sale of securities).	Total receipts.	Expenditure. Salaries. Medical officers.	Salaries. Nurses.	Salaries. Stewards, clerks and inferior servants.	Medicines. European.	Diet.	Miscellaneous charges.	Buildings or repairs.	Total expenditure.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
		RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Madras.	Government Ophthalmic Hospital, class I. Hospital was opened in July 1819. The present hospital was occupied on 31st March 1886. The Lady Lawley wards and the European operation wards were opened on 13th February 1911. The administration and the septic blocks were opened on 1st August 1914 and 10th September 1914, respectively.	24,402	42,838	1631 (*a*)	68,871	10,887 (*b*)	4,490 (*c*)	9,025 (*d*)	5 723 (*e*)	20,750 (*f*)	12,421 (*g*)	5,575	871

Number of patients treated in 1915 ... ... — 2,593
Average daily sick ... ... 172·34

(*a*) "Miscellaneous receipts" Rs. 1,631, comprise the following items:—Hospital stoppages recovered from paying patients, Rs. 1,604, and "Fines recovered from contractors," Rs. 27. The amount is less than the last year's by Rs. 69 and this calls for no remarks.

(*b*) The Superintendent's salary is debited to Medical College and is not included in this amount. The amount exceeds last year's figure by Rs. 329, due mainly to the increased rates of pay sanctioned for military assistant surgeons.

(*c*) The salaries under "Nurses" for the year are Rs. 4,490 against Rs. 3,664 in 1914—an increase of Rs. 826 due mainly to one of the two nurses sanctioned in G.O. 353, Pub., dated 15th March 1913, for the Septic block being employed throughout the year: she joined duty late in the year 1914.

(*d*) The figures under "Stewards, clerks and servants" also show an increase of Rs. 1,019 over those of last year's. This is due to the additional servants entertained for the new blocks being employed throughout the year where as in 1914 they were only for a few months and to the additional servants entertained for the nurses under G.O. 349, Pub., dated 9th March 1915.

(*e*) "European medicines" include (1) Rs. 2,823 on account of "Medicines supplied by Military Department," (2) Rs. 2,677 on account of "Indented Europe stores" and (3) Rs. 223 on account of Europe and special medicines purchased locally. The expenditure under this head has fallen during the year by Rs. 5,780. The increased expenditure in 1914 was due to the special instruments and appliances obtained from home for the septic block and the pathological laboratory.

(*f*) The expenditure under diet shows an increase of Rs. 614 over last year's. It is due to the increased number of daily average sick, viz., 172·34 against 151·68 in 1914.

(*g*) "Miscellaneous charges" include the following items:—

Travelling allowance.	Repairs to instruments	Bedding and clothing.	Country medicines and hospital necessaries.	Maintenance of electric installation.	Purchase and repair of furniture.	Purchase of books.	Petty construction and repairs.	Photograph charges.	Funeral expenses.	Service postage and telegram charges.	Rents, rates and taxes.	Office expenses.	Telephone charges.	Nurses' uniform.	Cost of stationery.	Printing and binding charges.	Freight charges.	Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
39	278	1,446	1,664	5,968	790	45	2	27	5	41	1,317	341	117	150	77	97	17	12,421

The present year's figure under "Miscellaneous charges" shows a decrease of Rs. 1,891 from that of last year. The difference is mainly under "Purchase and repair of furniture" which amounted in 1914 to Rs. 2,849 against Rs. 790 in the present year. The increased expenditure in 1914 was due to the furniture bought for the new blocks.

	RS. A. P.
Average cost of dieting a European patient in the general wards ...	0 10 8
Do. do. special wards ...	2 2 7
Do. Indian patient in the general wards ...	0 5 2

The average cost of dieting a patient in the general ward is the same as last year's in the case of Indians, while as regards Europeans and Eurasians it has increased from As. 10—6 in 1914 to As. 10—8 in 1915.
There are two special wards for European paying patients—one for males and the other for females each with two beds.
The special ward patients receive the ordinary European diet of the hospital supplemented by "extras".
The following are the details for Rs. 5,575 entered under expenditure in "Buildings or repairs":—

Description of works.	Government Ophthalmic Hospital, Madras.	Resident Assistant Surgeon's quarters.	Sub-Assistant Surgeon's quarters.
	RS.	RS.	RS.
Original works	2,664	...	443
Repairs	2,344	67	57
Total ..	5,008	67	500

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